

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** JEFFREY H. HELMS and EDMUND J. BLAIS

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Appeal No. 96-1947  
Application No. 08/161,618<sup>1</sup>

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ON BRIEF

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Before WILLIAM F. SMITH, JOHN D. SMITH and WALTZ,  
**Administrative Patent Judges.**

WALTZ, **Administrative Patent Judge.**

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 6 and 8. Claim 7 is the only other claim in this application and stands withdrawn from further consideration by the examiner (Answer, page 1).

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<sup>1</sup> Application for patent filed December 6, 1993.

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According to appellants, the invention is directed to an electrically insulating and ionically conducting solid, thermoplastic composition comprising a specific terpolymer, a polyether containing plasticizer, and an alkali metal salt (Brief, page 2). Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

1. An electrically insulating and ionically conducting solid, thermoplastic composition comprising:

(A) a terpolymer comprising (a) vinyl butyryl, (b) vinyl alcohol, and (c) vinyl acetate present in said terpolymer in weight fractions of a:b:c of 0.7-0.9: 0.1-0.3: 0.01-0.05, respectively, said terpolymer (i) having a number average molecular weight between about 20,000 and 300,000 and (ii) a Tg between about 40° and 80°C;

(B) polyether containing plasticizer compatible with said terpolymer present in said composition in an amount up to about 50% by weight based on the amount of said terpolymer present in said composition; and

(C) alkali metal salt;

wherein said thermoplastic composition has a Tg between about -25°C and 40°C.

The examiner has relied upon the following references as evidence of obviousness:

Marks et al. (Marks)	3,357,930	Dec. 12, 1967
Sammells	4,807,977	Feb. 28, 1989

Claims 1 through 6 and 8 stand rejected under 35 U.S.C.

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§ 103 as unpatentable over Marks in view of Sammells (Answer,  
page 3). We reverse this rejection for reasons which follow.

**OPINION**

The electrically insulating and ionically conducting solid, thermoplastic composition of appealed claim 1 requires a terpolymer comprising vinyl butyryl, vinyl alcohol, and vinyl acetate in certain specified weight fractions with a molecular weight between about 20,000 and 300,000 and a  $T_g$  between about 40E and 80EC.

Appellants argue that "Marks discloses, in contrast to Appellants' composition, electrically conductive coating materials." (Brief, sentence bridging pages 3-4). Appellants further argue that the polymer matrix disclosed by Marks is made by polymerizing one monomer while the claimed composition requires a terpolymer made from three different monomers (Brief, pages 3-4).

The examiner states that ". . . the terpolymer is disclosed through its component parts. Vinyl alcohol, vinyl acetate and its analog vinyl butyryl are suggested in Marks at column 2, lines 36-60." (Answer, paragraph bridging pages 4-5, and the final rejection, page 2). In the Advisory Action dated Feb. 21, 1995 (Paper No. 8), the examiner states that

"even though terpolymer is not recited explicitly Marks recites monomers which would make the claimed terpolymer."

"When relying on numerous references or a modification of prior art, it is incumbent upon the examiner to identify some suggestion to combine references or make the modification. [citation omitted]." ***In re Mayne***, 104 F.3d 1339, 1342, 41 USPQ2d 1451, 1454 (Fed. Cir. 1997). The examiner has failed to identify any suggestion to modify Marks in the manner proposed above. In fact, the use of polyvinyl butyryl is not disclosed or suggested at column 2, lines 36-60, of Marks but is disclosed at column 8, lines 1-4. Although Marks does disclose the individual use of polyvinyl alcohol, polyvinyl acetate, polyvinyl butyryl, and a polyvinyl acetate-alcohol copolymer (see column 2, line 52, and column 8, lines 2-3), the examiner does not identify any disclosure or suggestion in Marks of any terpolymer, much less the specific terpolymer recited in the appealed claims. As noted by appellants on page 3 of the Brief, the claimed terpolymer is made by copolymerizing three different monomers (see the specification, page 4, lines 14-35). A terpolymer is the reaction product of three monomers and thus would differ from

blends or mixtures of the monomers disclosed by Marks, particularly since the claimed terpolymer is required to have specific weight fractions of each component, a specific molecular weight range, a specific range for  $T_g$ , and form an electrically insulating composition while the coating of Marks must be electrically conductive (see column 1, lines 57-59). The examiner has failed to identify any suggestion in Marks or evidence of the knowledge generally available to one of ordinary skill in the art that would support the examiner's proposed modification of Marks. ***In re Jones***, 958 F.2d 347, 351, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992).

Sammells does not cure the deficiencies of Marks. It is not clear why Sammells was combined with Marks.<sup>2</sup> However, the examiner has not identified any disclosure or suggestion in Sammells that would cure the lack of disclosure or teaching in

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<sup>2</sup> It appears that Sammells was applied to show that "the metal halide salts of Sammells would be expected to function equivalently." (Office Action dated Apr. 29, 1994, Paper No. 4, page 4, and the Answer, page 4), although alkali metal salts are taught by Marks (column 3, lines 14-57). However, the examiner also states that "each reference discloses the basic components" (Paper No. 4, page 4) and "each reference suggests the basic components of the terpolymer" (Answer, page 4), presumably referring to each of Marks and Sammells.

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Marks regarding the specific terpolymer recited in the claims on appeal. The alkali ion conducting polymers disclosed and taught by Sammells (column 4, lines 39-68, see the Answer, page 3) do not include any terpolymers or even the three components of the terpolymer specified in the appealed claims.

For the foregoing reasons, we determine that the examiner has not established a ***prima facie*** case of obviousness in view of the applied references. Accordingly, the rejection of claims 1 through 6 and 8 under 35 U.S.C. § 103 as unpatentable over Marks in view of Sammells is reversed.

The decision of the examiner is reversed.

***REVERSED***

WILLIAM F. SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
JOHN D. SMITH	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
THOMAS A. WALTZ	)	
Administrative Patent Judge	)	

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jrg



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Lorraine S. Melotik  
Ford Motor Company  
Suite 911 - Parklane Tower-East  
One Parklane Boulevard  
Dearborn, MI 48126

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